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The Use of Digital Mediums in Expressive Arts Therapy

Capstone Thesis

Lesley University

Date: May 5th, 2021

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Abstract

In recent years, there have been considerable advances in technology, which have made digital devices such as computers and cellphones cheaper and more accessible for most Americans. The Pew Research Center (2019) reports that 96% of adult American's own a cellphone, with 81% owning a smartphone. Usage rates for cellphones and other digital devices amongst children and adolescents are also high with 95% of teens, aged 13-17, report owning a smartphone (Jiang, 2018). Despite these staggering statistics the field of psychology and creative therapies have been slower to adopt and incorporate the use of digital media and technology into the therapeutic setting with clients. Through an exploration of existing literature current applications of digital media use was explored in the areas of mental health applications, and the use of digital application with various populations such as people with Autism Spectrum disorder, as well as with differing age groups. Reasons for therapeutic resistance to the use of digital media was also explored, such as the therapeutic value of digital art versus traditional media, and a lack of training for counselors in college and university programs. Ethical considerations were another area of note, and the importance of maintaining client privacy and well-being with the use of digital technology in therapy. Lastly, the benefits and limitations of use are explored, as well as possible areas for future research.

Keywords: Digital Media and Technology, Mobile Applications, Expressive Arts Therapy, Creative Therapy

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The Use of Digital Mediums in Expressive Arts Therapy

Introduction

In recent years, technology has advanced considerably, making devices like computers, laptops, and cellphones more accessible for the masses. According to the Pew Research Center (2019) 96% of adult American's own a form of cellphone, and out of those, a staggering 81% own a smartphone; this number is up from 35% from the first study conducted in 2011. Nearly three quarters of U.S. adults report owning a computer or laptop and roughly half own tablet computers and/or e-readers (Pew Research Center, 2019). Digital ownership spans all age groups, but the most prominent adult age groups include the ages of 18-29 with 99% ownership of cellphones of some form and 96% owning smartphones, as well as ages 30-49 with 99% ownership of cellphones of some form and 92% owning smartphones. Teenagers 13 - 17 are also digital device owners/users with 95% of teens reporting that they own or have access to a smartphone, and 88% having access to either a laptop or desktop computer at home (Anderson & Jiang, 2018). Not only has the ownership of these devices increased, but usage of technology has also increased dramatically with people relying more on their digital devices and the internet every day, with 81% of adult Americans reporting that they go online daily, and 28% that say they are constantly online (Perrin & Kumar, 2019). Teens are reporting that they are online via computer or cellphone at very high rates as well, with 45% saying they are almost constantly online, and 44% reporting they are online several times a day (Anderson & Jiang, 2018). In

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addition to internet use, teens are also using digital technology to play video games; 84% on home gaming consoles, and 90% in general across consoles, tablets, or cellphones.

This trend may be in part due to the vast functionality that digital devices can offer. People are using digital technology and the internet to get information, stay current with the news, and learn new skills. Digital technology and social media have changed the way that we make and maintain relationships, the way that we communicate with one another, and they can impact not only self-identity, but also self-expression and self-esteem (Choi & Behm-Morawitz, 2018; Orr, 2012). Digital applications and the internet have transformed the way that we consume media and have taken us from observers and witnesses of content to the content creators, filmmakers, artists, and photographers (Orr, 2012). The use of these digital tools and media have made their way into the therapeutic setting as well and are being incorporated into creative therapies such as visual arts, music, and the intermodal use in expressive art therapy.

Even though digital media is cemented as part of American's daily lives, the integration of digital media and applications into the therapeutic setting has been a slower process. This is in part due to the responsibility of therapists to ensure client confidentiality and the ethical use of digital technology with client information, as well as protecting the content that clients create in the therapeutic session (Orr, 2012). Another reason for this focuses on the debate of whether digital technology and art is actually considered art (Orr, 2012; Orr, 2015). The qualities of digital tools compared to traditional analog tools is a topic of debate as well, questioning whether digital tools have the same or differing benefits as traditional tools, as well as what the possible negative effects might be with their use (Choe, 2014). Some digital tools have garnered negative stigmas associated with them, with fears of narcissism and addiction (Choi & Behm-Morawitz,

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2018). Some therapists have barriers in the use of digital technology due to the feeling that they have a lack of knowledge or adequate training in digital tools and methods (Orr, 2006).

The integration of digital media in the therapeutic setting began with the digital camera and photography and has since evolved to incorporate other media as well (Orr, 2010).

Computers, smart phones, tablets, and video games/virtual reality are all being used in the therapeutic setting in a wide array of applications and with many different populations of clients. Digital apps that can be run on smart phones and tablets are offering a variety of options for use within the therapeutic session, but also as self-help options for people to use at home. The advancement of technology has also seen the emergence of telehealth, and teletherapy services being offered to clients in a variety of ways – and especially prevalent with the Covid-19 pandemic requiring people to find ways to work and get services remotely while quarantining in their homes to prevent illness.

While there is a digital divide in the United States, with people in lower socio-economic classes being less likely to have access to the internet and digital devices, that gap is getting smaller (Pew research Center, 2019). As technology has advanced, cheaper options for devices and internet, have become available so that more people are able to connect in this way. This allows more people to have access to digital applications in the therapy category and teletherapy, which can help serve individuals who may not be able to get therapeutic services in other ways (Wasil et al, 2020).

In expressive arts therapy, creative expression in a variety of modalities is used to facilitate therapeutic growth. For a client to benefit from this they need to feel comfortable and connected to the therapist and the space (Rodgers, 2000). Many therapists begin in a modality where the client feels most comfortable, and for many in the younger generations they are

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comfortable and competent with digital technology due to the increased prevalence and use of technology such as cell phones, tablets, and video gaming systems in their everyday lives (Ofcom 2012; McPake et al. 2013, as cited in Sakr, Connelly, & Wild, 2018; Sakr, Connelly, & Wild, 2018). Digital media can be a useful tool in connecting with the clients of these digital generations, as well as the generations that have adapted to digital use.

This thesis explored how technology and digital applications are being used in the field of psychology and with creative and expressive arts therapy. It further sought to investigate the effectiveness of its use, as well as the benefits and limitations to its use in this category. Accessibility, therapist and client perceptions, and ethical concerns are also explored, as well as areas for possible future research.

Literature Review

Digital technology has become so prevalent in our daily lives, and our engagement in digital culture has grown exponentially (López, 2012, as cited in Carlton, 2014), so much so that this engagement has changed the way we communicate with others, the way we think, and our behavior (Carr, 2008; Kapitan, 2007, 2009; Orr, 2010, as cited in Carlton, 2014). People are physically interacting less but are using digital media to exchange ideas more (Orr, 2010). Blythe et al. (2007, p. 5, as cited in Carlton, 2014) states that our interactions with digital technology reflect “new forms of expression and a subtle change in our expectation of what is possible” as evidenced by behaviors such as checking email, searching for knowledge with Google searches or in videos on YouTube, and communicating online. People can learn about almost anything searching online, and this has given people the ability to educate themselves and come together over personal issues, including mental health (Orr, 2010). Those with mental health needs are

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using digital media to find alternate ways to learn about, treat, and think about their mental health issues and wellness (Wasil et al., 2020).

Many people that require mental health services are not receiving them due to a variety of reasons including high costs, inadequate transportation, lack of providers in poorer neighborhoods and rural areas, and a lack of trained providers (Wasil et al., 2020). Doubling the amount of mental health providers in the United States would still not be adequate to serve the number of people in need of these services (Kazdin & Blase, 2011, as cited in Wasil et al., 2020). Digital mental health apps could be one solution to a lot of these barriers (Agras, Fitzsimmons, Craft, & Wilfley, 2017; Fairburn & Patel, 2017; Kazdin, 2017, as cited in Wasil et al., 2020). Given that three quarters of all Americans own a smartphone (Smith, 2017, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019), digital applications are readily accessible, extending the reach of interventions designed for mental health to a multitude of users, including those that encounter barriers to treatment (Stiles-Shields, Montague, Kwasny, & Mohr, 2019). Applications on mobile devices enable the user to have daily access to these applications and allows for the possibility of real-time monitoring of symptoms, assessments, and interventions during situations that occur for that individual in a variety of real-world settings, and not just in face-to-face sessions with a clinician (Proudfoot, 2013, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019).

Publicly available mental health apps claim to assist users in areas such as mindfulness, depression, anxiety, eating disorders, stress management, and cognitive behavioral therapy (CBT). Given the growing popularity of these apps there have been efforts to review and evaluate them to understand them and their efficiency or lack thereof (Wasil et al., 2020). Reviews and meta-analyses have suggested that mental health applications have been effective

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with use in many different mental health conditions, such as, depression and anxiety (Firth, Torous, Nicholas, Carney, Pratap, et al., 2017; Firth, Torous, Nicholas, Carney, Rosenbaum, et al., 2017; Josephine, Josefine, Philipp, David, & Harald, 2017; Linardon et al., 2019, as cited in Wasil et al., 2020), stress (Firth, Torous, Nicholas, Carney, Rosenbaum, et al., 2017, as cited in Wasil et al., 2020), and schizophrenia (Firth & Torous, 2015, as cited in Wasil et al., 2020).

While many publicly available mental health applications are based on and include evidence-based content like those used in empirically supported psychotherapy methods, most of the applications that have undergone empirical testing are not available to the public, and those that are have difficulty in obtaining and maintaining users (Wasil et al, 2020).

Despite depression being a commonly treated mental health issue in primary care settings (Linde et al., 2015, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019), most patients referred to therapy do not undergo treatment due to a variety of barriers that impede starting or maintaining in person treatment methods (Gonzalez et al., 2010, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019). There are existing applications for smartphones, and more in development, for the treatment of depression with the use of psychological interventions (Shen et al., 2015, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019) that may address some of these treatment barriers. Most applications that utilize psychological interventions are informed by behavioral and cognitive intervention strategies (Shen et al., 2015, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019), which hold strong evidence of the efficacy of its use, with individuals with depression in face-to-face treatment (Cuijpers et al., 2013, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019). While the availability of digital applications increases the accessibility of depression treatments, the efficacy of treatments delivered in this way cannot be assumed to match those of face-to-face interventions (Stiles-Shields, Montague,

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Kwasny, & Mohr, 2019). As previously mentioned, mental health applications with empirical evidence struggle to retain users (Wasil et al., 2020), and this is shown in the typically low app use of these applications that use behavioral and cognitive interventions as well (Stiles-Shields, Montague, Kwasny, & Mohr, 2019). When evaluated next to other health and wellness applications, mental health apps have the lowest continued use after 30 days (IMS Institute for Healthcare Informatics, 2015, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019). This low rate of use, and difficulty maintaining users, makes evaluating the efficacy of these applications difficult (Stiles-Shields, Montague, Kwasny, & Mohr, 2019).

A study conducted by Stiles-Shields, Montague, Kwasny, & Mohr, (2019) examined applications for depression with a focus on areas such as, app usage and efficacy evaluation. Recruitment for participants was done via Craigslist due to the fact that Craigslist is free to use, reaches a wide area of cities in the United States, and can be accessed online, which is representative of the growing trend of individuals seeking help through the internet versus other methods. Participants needed to meet many requirements to be eligible for this study including scoring a minimum of 11 on the Quick Inventory of Depressive Symptomatology (QIDS; Rush et al., 2003, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019), having an Android phone, at least 18 years of age, were not severely suicidal, were not receiving psychotherapy, and were on a stable dose of antidepressant medication or not currently on any medication for the treatment of depression (Stiles-Shields, Montague, Kwasny, & Mohr, 2019). After eligibility was determined and phone interviews were conducted with eligible participants, 30 individuals were selected to participate in the study. These participants were randomly assigned to one of three treatment groups, a group using the application Boost Me, an Android app using core strategies of behavioral activation to increase positive activity and mood monitoring (J. S. Beck, 2011, as

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cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019), a group using the application Thought Challenger, an Android app using the core strategy of cognitive therapy (CT) to aid in identifying dysfunctional negative thoughts and creating positive counterthoughts, and a waitlist control group that did not use any intervention. The applications used in the interventions incorporate behavioral and cognitive interventions and are free of cost. Each treatment group received use of the app they were assigned to, as well as six weeks of weekly coaching sessions and one lesson per week of content delivery. The coaching received was brief (5 min or less), supportive coaching, aimed at helping users get started with the app by having the users open the app and get familiar with its features in the first session, and then to maintain engagement during the duration of the intervention.

Measures to improve the validity of the study included the same clinician providing coaching to all the participants, as well as using self-report measures on the PHQ-9, a self-report instrument measuring depressive symptomology (Kroenke & Spitzer, 2002, as cited Stiles-Shields, Montague, Kwasny, & Mohr, 2019), to assess the participants after the initial baseline assessment was conducted to maximize blinding (Stiles-Shields, Montague, Kwasny, & Mohr, 2019). Safety protocols were put into place to ensure that the participants were assessed for suicidality levels while undertaking the interventions, and in the event that a participant was screened for high suicidality they would be alerted to seek emergency treatment or were called to do further suicide risk assessments. There were no instances of severe suicidality recorded during this study.

The results of the study conducted by Stiles-Shields, Montague, Kwasny, & Mohr (2019), showed that the highest PHQ-9 scores were those taken at baseline, and that there was a decrease of severity of symptoms over time from the midtreatment assessment done at week three and the

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after-treatment assessment done in week six. There was one final assessment done one-month post treatment that showed an increase in symptoms. The data also showed that there was a more significant decrease in depressive symptoms with the use of Thought Challenger, but that there was a higher app usage with Boost Me. The differences in app usage can be explained by a few different factors including the fact that Boost Me had a persistent notification to encourage engagement, and the fact that Boost Me encourages engagement with the app by having users log on to choose rewarding activities to improve mood when having symptoms of depression on a regular basis. Also, Boost Me's design of users being encouraged to open the application twice in order to schedule an activity and then rate how the activity affected their mood after completion, which differs from Thought Challenger's design of restructuring a thought in a single use of the application.

Limitations to this study include the relatively small sample size, the possibility of investigator bias due to the same person taking on the roles of investigator, assessor, and coach, and limiting the applications to only those available on Android platforms (Stiles-Shields, Montague, Kwasny, & Mohr, 2019). While the rationale for recruiting via Craigslist was valid, this caused a lengthy recruitment period and somewhat limited the recruitment pool of eligible applicants. Also, this study utilized coaching to help facilitate familiarity and engagement with the applications, and this may not be representative of results without this human intervention.

One issue some people encounter when exploring digital applications is wading through all the apps that are available. Finding a suitable application can be overwhelming, as even when searching for something specific on the various platforms bring up overwhelming and potentially unreliable results that an individual or parent must go through to evaluate the applications functionality and/or targeted age range (Demo, 2017). To assist with this, organizations and

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individuals have created specialized databases and search engines to help users narrow down these results to a more manageable number or categorize apps in a way that make them easier to navigate (Demo, 2017).

Some professional associations, including the American Psychiatric Association, have released plans to evaluate mental health apps, but due to the overwhelming number it would be difficult to evaluate them all due to the amount of time and money it would take to complete this task (Wasil et al., 2020). It may be beneficial for these organizations to focus on apps that have the most user counts and are the most popular, to better inform users of the content and methods used within them (Wasil et al., 2020).

Digital applications and technology have been examined in use with varying populations including people with autism spectrum disorders (ASD). ASD causes deficits in a person's social skills and interactions with others (American Psychiatric Association, 2013; Fodstad, Matson, Hess, & Neal, 2009, as cited in Lee, 2019), including difficulty understanding social norms and expectations, such as, appropriate greetings, and recognizing familiar people (Attwood, 2006; Hobson & Lee, 1998, as cited in Lee, 2019). People with ASD also have trouble interpreting facial expressions and understanding emotions (Krasny, Williams, Provencal, & Ozonoff, 2003, as cited in Lee, 2019), and cannot respond appropriately (Ryan & Ni Charragain, 2010, as cited in Lee, 2019). Due to these difficulties' children with ASD can have a hard time with everyday social interactions with peers (Lee, 2019), communication, and imagination (Baird & Norbury, 2016, as cited in Lee, 2019). Evidence points to the inability to engage in interactive play and ignoring nonverbal social cues due to not being able to recognize them as the possible cause of these deficits (Jarrold, 2003; Lillard et al., 2013, as cited in Lee, 2019). In order for children with ASD to improve their understanding of, and engagement in, social reciprocity behavior, they

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need to be taught specific appropriate behaviors that are involved in social interactions (Martins & Harris, 2006; McPartland, Webb, Keehn, & Dawson, 2011, as cited in Lee, 2019).

Applications being used with this population include some that rely on the camera function of a device, while others use GPS on a wearable device to track children, send push notification reminders to complete daily tasks and are even used to track and share data between home, school, and medical facilities to aid in care continuity (Demo, 2017).

A study conducted by Lee (2019) examined the use of augmented reality (AR) with children with ASD to evaluate its efficacy in helping them gain a better understanding of greeting behavior and nonverbal social cues in social interactions. The participants for this study were three boys, between the ages of 9-12, that all met the inclusion criteria including a clinical diagnosis of ASD, not taking any medications, not undergoing any other therapies at the time of testing, and a functional IQ less than 90. All the participants exhibited deficits in noticing and understanding nonverbal social cues, such as facial expressions and body language. Lee (2019) redesigned the Quiver™ 3D AR coloring apps (<http://www.quivervision.com/>) to create the materials for use in this study and developed ten different social scenarios to present to the children during the intervention phase. During the intervention, the participants read the story with a therapist and are introduced to the augmented reality coloring book (ARCB) picture of the social interaction from the story. After discussing the story and picture with the therapist, the child is asked to color the picture. Some of the picture coloring areas are focused on things like facial expressions or hand gestures, or socially symbolic objects, this is used to help the children notice things they may not have noticed prior. The child can then take a digital tablet and view the animated scene in 3D through virtual reality, all in the colors that they chose. Finally, the children are then asked to act out the interaction with the therapist. The experiment had three

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phases including the baseline phase to collect baseline data on the participants, the intervention phase consisting of 10 sessions over five weeks, and the maintenance phase occurring six weeks after the interventions were finished. During these phases, the Social Story™ (Baker, 2003a, b, as cited in Lee, 2019) trials (SSTs) tests were used to score the children's understanding and responses to various social situations. The data was compared using the Kolmogorov Smirnov test (KS-test), to determine if the children experienced improvement in their social interaction judgement skills. All three children scored significantly higher during the intervention phase than they did at baseline and were still at a higher score over baseline during the maintenance phase. In feedback from the therapist and parents, there were noticeable changes in the children's behavior surrounding social situations, with the children seeming more attuned to other's nonverbal cues, as well as responding to social situations in a more appropriate way. The therapist noted that the children were excited and motivated to engage in pretend play, and to act out different roleplay scenarios learned with the ARCB with their teachers and peers.

The success of the ARCB could be due to a few possible reasons. The ARCB animation coupled with being played on a mobile device is able to capture the children's attention and focus more than static pictures or traditional coloring books could (Farr, 2012, as cited in Lee 2019), and because the ARCB is non-threatening, it reduces the child's stress and increases their motivation to focus and learn (Lee, 2019). Studies have shown that 3D animation with spatial information is able to help people increase social skills due to the user being able to see the characters interactions, gestures, and expressions in real time, and they are able to mimic these skills without having to imagine the actions from a 2D static image (Hoyek, Champely, Collet, Fargier, & Guillot, 2014; Wraga, Thompson, Alpert, & Kosslyn, 2003, as cited in Lee, 2019).

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Future research in this area might address the limitations of the small participant number used, and include a higher number of participants, as well as use a wider variety of age groups and geographical locations. Lee (2019) also suggests that in future studies the training materials could be more complete and more representative of real-life scenarios.

Demo (2017) conducted a comparison of two applications being used for people with ASD, Samsung's Look at Me, launched in 2014, and Toca Boca, which was launched in 2015 as part of an "autism app bundle" released for Autism Awareness Month. The applications seem to take a differing approach to how they view ASD. Look At Me aligns with the view taken by Autism Speaks, who informs the marketing for this application, that ASD is a disease that requires behavioral intervention to "fix", and Toca Boca coming from the neurodiversity thinking of ASD being a difference and not a deficit (Demo, 2017). While Toca Boca does not design its applications specifically for people with autism, they have become very popular for families and paraprofessionals for use with children that have ASD (Demo, 2017). Toca Boca Hair Salon app is regularly listed among the "top autism apps" due to its ability to help users become more comfortable with going to the barber shop and the common sensory challenges that people with autism experience in this setting (Demo, 2017). The app accomplishes this by allowing for the user to experience the sensory environment and have control over the activities that occur there from the comfort of their home or another space they feel comfortable (Demo, 2017). Other applications developed for and used by people with Autism include apps like Samsung's Look at Me, that aims to help people with autism better identify and use neurotypical norms of facial expression and emotions, as well as increase the use of eye contact (Demo, 2017). Despite the fact that there is growing controversy within the neurodiversity movement over eye contact being considered a social deficit in people with autism, the Look At Me app has

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reached the top of educational apps downloaded in the United Kingdom (3rd), the United States (4th), and Brazil (5th)(Demo, 2017).

Another population where augmented reality (AR) is being used is with individuals with Down Syndrome. Down Syndrome is caused by the presence of an additional chromosome in the 21 pair and is apparent at birth (Pueschel, 1991, as cited in Martín-Sabarís, & Brossy-Scaringi, 2017). Individuals with DS have difficulty keeping attention for long periods of time, as well diminished capacity for short term memory, and difficulties with long term memory (Martín-Sabarís, & Brossy-Scaringi, 2017).

A study conducted by Martín-Sabarís, and Brossy-Scaringi (2017) sought to evaluate multiple things, including the efficacy of AR in spatial perception and road mobility of people with DS, as well as to determine if AR encourages the ability to have long-term recalling for those individuals. This was done by having participants visit two different museums utilizing a prototype of Augmented reality for mobile devices, to direct their movements from one place to another within the museums to learn contents relative to these museums. Participant selection was done through the *Foundation of Down Syndrome of the Basque Country*, a foundation that works with individuals with DS, and the fulfillment of a recruitment questionnaire (Martín-Sabarís, & Brossy-Scaringi, 2017). Out of the completed questionnaires, 15 individuals were chosen and divided into three groups for the intervention, based on cognitive maturity and how familiar they were with the use of Communication and Information Technologies (CIT) tools. Many participants felt a certain pressure to approve the experience, which was cited as a negative factor of the experience, and a constant feeling amongst the group was a fear of making an error and not having self-confidence in their abilities during the experience. Participants struggled with explaining concepts despite acknowledging their confidence in understanding the concepts

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related to the use of AR, and some participants cited uneasiness with moving around with a required element that was new and unfamiliar to them. All participants regardless of cognitive maturation and familiarity with CIT tools were able to complete the intervention as it was designed, and they all intuitively recognized the button to begin the program, as well as the arrow that represented themselves as they were moving around (GPS). Participants often got tired with the talking texts, preferring to focus on illustrated images, and as such contents provided in the written and audio texts were rarely recalled by the participants. The level of cognitive maturity seems to determine the ability to relate the activity to everyday life activities, as those with lower cognitive maturity had a difficult time with this concept. Along with higher cognitive maturity came an increased satisfaction of the experience, more autonomy in using the application and navigating surroundings, and lessened the fear of making errors while using the device. Previous use of CIT resulted in users being more at ease with the intervention and the incorporation of AR in this experience.

While this study shows possible positive areas of learning and communication in people with DS and the use of AR, more research is needed to see the efficacy of its use in various areas, as well as further develop areas that would be impacted positively with this technology in this and other populations (Martín-Sabarís, & Brossy-Scaringi, 2017). Future research could include a larger sample of individuals and a broader or more targeted range of cognitive maturity, as well as look into other locals or uses of AR to impact memory and/or geographics navigation. Further research would also benefit from looking further into the ways that AR can be used in people with DS regarding memory, with differing ways of generating text information or with more of an emphasis on visual information.

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While creative therapy has been slower than the general population to adopt digital technology, this divide has become more balanced over recent years (Orr, 2012). The evidence is showing more art therapists utilizing digital technology in both personal and professional use, as well as integrating it into their therapeutic practices (Kuleba, 2008; Orr, 2006b, 2012; Peterson, 2010; Peterson, Stovall, & Elkins, 2005, as cited in Carlton, 2014). Therapeutic creative digital technology used with clients in this setting include apps for art making, such as, video editing, animation, digital drawing, collage, and photography (Carlton, 2014). Digital media and technology have allowed therapists to integrate more methods and tools into the therapeutic setting than ever before, due to lower costs and greater accessibility (Wolf, 2007). As an example, in the earlier days of phototherapy, cameras, film, and darkrooms were required, now with the advancement of technology and digital media this can be done with a cell phone and computer editing software or applications, thus enabling far more therapists to bring this form of therapy into their practice with clients (Wolf, 2007). Digital methods give the ability to integrate a wider variety of creative elements that clients cannot achieve with traditional methods, such as darkroom photography, thus enabling clients to gain a deeper self-understanding through the use of a wider array of creative options than was previously available to them (Wolf, 2007). When these new media are employed by art therapists, clients report benefit from the qualities digital media affords them, and from rapport-building experiences (Edmunds, 2012; Kuleba, 2008; Orr, 2005, 2012, as cited in Carlton, 2014). Digital media has been shown to increase a client's attendance and longevity in therapeutic treatment, and that it evokes curiosity in clients which leads to increased communication, self-esteem, and feelings of acceptance (Weinberg, 1985, as cited in Evans, 2012). The ability to save and store digital material allows for a small footprint for saved files versus traditional art storage which requires far more room (McLeod, as cited in

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Evans, 2012). Digital files can also be easily accessed and evaluated, making the ability to view a client's therapeutic process easier (Canter, 1989; Hartwich & Brandecker, 1997, as cited in Evans, 2012). Digital media can also be used in tandem to traditional modalities to take experientials even further and promoting deeper therapeutic growth (Evans, 2012).

Digital media be a useful tool in expressive arts therapy as a more comfortable medium for clients that have a block of expression when faced with traditional art media; they may be less familiar or comfortable with traditional arts media, they believe they do not have the skill to create with traditional tools, they have a resistance to the tactile or physical properties of some media (i.e. paint or clay), or they may not be able to manipulate the tools needed to create with traditional mediums/art forms (Malchiodi, 2018a; Orr, 2005). According to Hartwich and Brandecker (1997, as cited in Evans, 2012) clients with severe psychological illnesses are less intimidated when using computers compared to traditional tools, like paper and a paintbrush. Physically challenged clients can use apps that can allow them to create expansive drawings and paintings with the use of only one finger, or even by the movements of their eyes (McNiff, 2018). Art applications have been used with pediatric patients in hospitals due to the benefit of tablets being easy to clean, and not have the same risk of transmitting infection to patients with compromised immune systems that traditional art materials do (Malchiodi, 2018b), and they have been used in hospital settings to help keep patients calm during procedures such as having an IV inserted (Malchiodi, 2011 as cited in Malchiodi, 2018b). There have also been applications developed for the use of people with dementia (Joddrell, Astell, & Astell, 2019). Digital media has benefited not only individual therapy, but also for use in group therapy. Digital mediums offer greater spontaneity over traditional methods, as prior to these advancements, cost and practicality could limit the number of equipment available to the group, (i.e., cameras and

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computer terminals), and in photography, photos would need to be printed to modify them with traditional art mediums (Wolf, 2007).

Digital media has been successful in overcoming some barriers that clients may have. Jamerson (2013) discusses his work with children and adolescents in the mental health field, and how many of them held a resistance to traditional talk therapy. He goes on to note that he often saw these children and teens interacting with digital media on their devices, texting, playing video games, and using social media, before and after meeting with them. It was through this observation that he began to think of ways to incorporate digital media into his work to engage this population with mental health and therapeutic services. Jameson (2013) holds a workshop called the Expressive Remix Group (ERG), which consists of weekly group sessions in “expressive remix therapy”, a “remix” of narrative therapy (NT) and expressive arts therapy (EAT). In these sessions the participants learn digital skills on tools such as iPads, cellphones, and digital software, while exploring ways of narrative making and creative expression. This workshop lasts for 13 weeks and culminates in a final exhibit session where participants can share their work with family and friends. Other studies that examined the use of digital media with children and adolescents have found many benefits, including improved academic performance and problem-solving skills, decreased anxiety and social fears, exploration of emotions and catharsis, improved relaxation and creative skills, and relaxation (Sisson et al., 1985, as cited in Evans, 2012). Digital media has also been shown to be effective in the treatment of grief and bereavement with this age group (Robson, 2008, as cited in Evans, 2012).

The choice of whether to use digital media in creative therapy might not exist due to the inescapable presence of use for people with access to digital media (Austin, 2009; Blythe et al., 2007; Edmunds, 2012, as cited in Carlton, 2014). Younger and future generations are immersed

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in the use of digital technologies and have developed an “expertise and fluency with technology that those born before 1980 struggle to understand” (Edmunds, 2012, p. 11, as cited in Carlton, 2014; Evans, 2012). This media and technology exposure impacts the way that these individuals communicate, learn, and make sense of their world and culture (Austin, 2009; Blythe et al., 2007; Edmunds, 2012, as cited in Carlton, 2014). To practice competently with individuals of these generations, creative therapists need to recognize this culture and their lived experiences in the digital world. If you exclude this media in clinical practice, you risk marginalization and alienating these clients by not integrating a large part of their lives, identity, and culture (Carlton, 2014).

Despite these benefits there remain therapists that are reluctant to adopt the use of these tools in their practice due to a variety of reasons, such as the high costs of purchasing computer tools, i.e. creative applications, despite the fact that traditional media can also be costly due to the need for replacement of those materials and tools (Evans, 2012; Malchiodi, 2000; Orr, 2006b; Peterson, 2010; Peterson et al., 2005, as cited in Carlton, 2014). Other resistances include lack of access (Malchiodi, 2000; Orr, 2006b; Peterson, 2010; Peterson et al., 2005, as cited in Carlton, 2014), and a lack of training available for competency in the use of digital technology, and how to integrate it into the therapeutic session (Asawa, 2009; Kapitan, 2009; Kuleba, 2008; Moon, 2010; Orr, 2012; Peterson, 2010, as cited in Carlton, 2014). Art therapy education has shown to have a lack of curricula on digital tools and media for students to develop competence in using digital tools and media in general and with clients, and learning more about utilizing these methods is often self-taught, leading to practitioners feeling under-qualified and inexperienced (Carlton, 2014).

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There have been some documentation of how some professors have brought digital learning, such as video editing, collage software, and Photoshop skills, into their art therapy classrooms (Orr, 2006a; Wolf, 2007, as cited in Carlton, 2014). Wolf (2007) documents his teachings of art therapy graduate students in the art of phototherapy, and how they have evolved from utilizing traditional dark room photography to now working almost entirely with digital photography, media, and technology. Some of the projects that Wolf (2007) uses with his students include collages, self-portraits, creative stories, and dream photos, which can all be easily adapted for the student's future use with clients. When graduate students engage in training experientials that they may use with clients, they get a deeper understanding of what the clients experience might be. Connecting to these exercises from their own engagement helps them to be able to use and modify the experientials to suit their client's individual needs more effectively (Wolf, 2007). The students also communicate and share their work in an online forum setting. While some lamented that an online forum contributed to less participation, there was an added level of comfortability for many participants that came from not having to be face to face with a large group of people when opening up about personal issues or sharing created work (Wolf, 2007). Respondents also commented that the use of digital mediums were far more convenient than traditional methods due to taking up less time, and not having the same level of mess to clean up afterwards (Wolf, 2007). An excerpt from a student's final paper sums up their experience, as they state "I was very resistant to the process of digital phototherapy, learning Photoshop, and writing this paper. It was challenging to deeply analyze my own work and integrate it into my consciousness. It was well worth it because I feel as though I understand myself and my art more deeply" (Wolf, 2007, p. 132). They go on to say that "Learning the

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stories of other people's lives can touch us in deep ways because we can feel profoundly and empathically understood" (Wolf, 2007, p. 132).

Another resistance and barrier to the use of digital technology is a reluctance to use 'synthetic' new media, and the debate over efficacy and therapeutic quality of digital media versus traditional art forms (Asawa, 2009; Gerity, 2001; Kapitan, 2007; Malchiodi, 2000; Orr, 2006b; Potash, 2009, as cited in Carlton, 2014). Richard Sennett (2008), an American sociologist, believed that contemporary artists gravitated toward the use of technology in their art for the unparalleled control and accuracy digital tools offers them (Austin, 2009). Sennett goes further to say that he thinks that this precision, that is more accurate than the artist can create with their own eyes and hands, diminishes the sense of human scale, and leads to "a disembodied design practice" (Sennett, 2008, p. 42, as cited in Austin, 2009). Sennett argues that the use of the hand is required in the creative process for authentic design but subscribing to this argument risks limiting the future of art therapy to "traditional" media or digital media that mimics traditional methods (Austin, 2009). Austin (2009) contends that "although techno-digital media may diminish the role of the hand in their current applications, they have the potential to engage the mind and body in profound and meaningful ways" (p. 84).

Blakeslee and Blakeslee (2007, as cited in Austin, 2009) discussed "body maps" and how the mind has a map of the body, and that map changes when a person uses tools, extending the body map to include the tool being used, instead of the arm ending at the fingertips as it would normally. When a tool is mastered, it effectively becomes one with the body according to the brain. Tools and perception influence what the mind believes the body is doing, and the motor cortex views real and imagined movements as virtually indistinguishable. This is also evidenced by the brain processing virtual movements the same as real movements; for example, believing

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that the actual body moves ten times as fast when the virtual body moves at that speed. While at the time of publication, Austin (2009) remarked that the computer interface was not refined enough to be integrated into body maps, he leaves room for the advancement of technology to be able to have this possibility in the future. Once this occurs, and the things we create are seamlessly unified within our minds and bodies, Austin (2009), concludes that we will be far past the debate on what the hand's role is in the creative process.

Another area in debate when it comes to digital art making is with ready-made images, for example some applications and software have a 'stamp' tool that allows users to scroll through a multitude of ready-made images, photographs, and illustrations, that they can then re-size, rotate, and place anywhere within the art-making area (Sakr, Connelly, & Wild, 2018). The varied opinions on the use of these images with children's art making include the thought that these ready-made images stifle a child's creativity, and limit's their creative expression (McLennan 2010; Szyba 1999, as cited in Sakr, Connelly, & Wild, 2018). Conversely others believe that these images enhance children's expression by allowing the child to play with and alter the images they want to utilize for their art (Sakr, Connelly, & Wild, 2018). One theory concludes that children are in constant communication with the culture of their world, including popular culture, and that they bring in these everyday experiences and images when art making (Klerfelt, 2006, as cited in Sakr, Connelly, & Wild, 2018; Malin, 2013, as cited in Sakr, Connelly, & Wild, 2018).

Observing the way these materials are used can show the way that materials, like ready-made images, impact and influence digital art making (Bjorvall & Engblom 2010, as cited by Sakr, Connelly, & Wild, 2018). Observing the way children make meaning with tools, like ready-made images, how the children incorporate these images, and the objective of their use,

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allow for one to see the specific influence a tool has on the digital art making process and product (Vannini 2007; Bjorkvall & Engblom 2010, as cited in Sakr, Connelly, & Wild, 2018).

When comparing the collage making with ready-made images of children and adults in an inter-generational art class, Heydon (2011, as cited in Sakr, Connelly, & Wild, 2018) found that children used the ready-made images in a less restrictive way, breaking free of the objects literal meanings and making meaning with the objects in imaginative ways.

Sakr, Connelly, & Wild (2018) conducted a study that investigated the digital art making of children with ready-made images with a focus on how these images were being used. The art examples used for this study were part of a larger study that had compared children's art making in composition and content and included 18 children, aged 4-5, from three state-funded schools in South East England. The children were observed while making digital art, using an art software program called Tuxpaint on the researcher observer's laptop and mouse for 20-25 minutes. Tuxpaint was chosen because it was freely downloadable and had a large variety of ready-made images of all types. This analysis initially focused on the 10 of these children who incorporated ready-made images into their work, and then after a preliminary analysis found the images were being used in a wide variety of ways, five children were chosen for a more in-depth analysis. The analysis included looking at the episodes of art making during which the images were being used, even when the images used did not end up in the final piece created and evaluating the children's direct talk while creating with these images to infer what the underlying purpose of use was for each child. This analysis was informed by the categories of Malin (2013, as cited in Sakr, Connelly, & Wild, 2018), that detail the different agendas that children have for artmaking purposes, including self-representation, aesthetics, experimentation, and storytelling.

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The results of the study showed that each of the five participants appeared to utilize their images in different categories of image use agendas (Sakr, Connelly, & Wild, 2018). These categories used were 1) aesthetics, 2) experimentation, 3) storytelling 4) stimulating a conversation, and 5) part of a coherent and static representation. This data supports that ready-made images do not inhibit or invigorate children's artmaking, but they offer a medium that encourages children to have a diverse range of artmaking experiences. The findings also shed light on how much can be missed by educators and practitioners if they are focused solely on having children strive for visual realism, rather than being cognizant of and respond to the 'multiple pathways' children use and the potentials of their non-representational artmaking. Sakr, Connelly, & Wild (2018) suggest further research in the exploration of ready-made images and children's development of and engagement with popular culture, how they fuel consumerism, as well as possibly reinforce cultural stereotypes. Another area of focus could be on the way that children's use of ready-made images changes over time.

There are many art and creative applications available, but not many that have been developed for therapeutic use. Choe (2014) conducted a study with art therapists and art therapy trainees with clinical experience to examine perceptions of art apps and their use in art therapy sessions. When determining the clinician's thoughts on what was necessary for an art application to qualify as a therapeutic tool, multiple features were identified, including therapist's control over options, assessment capability, and confidentiality (Choe, 2014). Most of the therapists agreed that they would like to see a portfolio feature to save and store client's images in their own separate folder, like what is commonly done with traditional art creations. Another area identified as something that would be beneficial for art therapy is the ability to record the artistic process. The ability to switch between media easily was also identified as a benefit to a digital art

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application, allowing the client to switch from painting to drawing, collage, and more to give them a variety of tools to capture expression. Lastly, the importance of having ample security control for client privacy is a must have for any digital application used in the therapeutic setting, including concerns over applications having the ability for clients to share their creations through email, text, and on social media platforms. While this type of sharing could be empowering for a client, there are privacy concerns with the sharing of sensitive materials and topics in an online setting.

With the growing use of digital technology by practitioners for personal and in clinical use with clients, as well as the digital lives clients have outside of the therapeutic session, many concerns regarding ethics have arisen. These ethical concerns include confidentiality concerns over the storage and use of client's creations, the use of internet searches to find out information on a person (be it client or therapist), social media presence and guidelines, and therapist-client boundaries (Malchiodi, Cutcher, & Belkofer, 2018).

Part of becoming competent in the use of digital technology, includes becoming versed in the various ethical guidelines needed to ensure client safety and privacy when using these platforms. Therapists also need to be knowledgeable about the devices they are using, as well as encryption standards and new technologies, and should only use a secured network to transmit client data and created images and files (Malchiodi, Cutcher, & Belkofer, 2018). Client's images when posted online can be downloaded, copied, and manipulated, and these creations are never really gone after deletion, as they can still be retrieved, even years later (Malchiodi, Cutcher, & Belkofer, 2018). As such, it is imperative to educate clients about the risks and possible outcomes that can occur when sharing private communications, sensitive information, and created files and images, especially on social media platforms.

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Telehealth and teletherapy have been on the rise and have become even more prevalent and essential during the Covid-19 pandemic over the past year. Virtual sessions can be more convenient for clients or preferred for a variety of reasons, including social phobia, lack of transportation, and disability (Malchiodi, Cutcher, & Belkofer, 2018). Therapists offering teletherapy services need to be aware of the differences between face-to-face sessions versus virtual sessions and the varied ethical concerns virtual sessions pose (Malchiodi, Cutcher, & Belkofer, 2018). Virtual sessions can occur over the phone, on virtual platforms, messaging apps, and more. One thing to think about when conducting a virtual session is who might be in the “virtual room” and could be privy to sensitive topics or client information, and as such, telehealth authorities recommend doing a camera scan prior to a session to verify that the client is in a secured area (American Telemedicine Association, 2013, as cited in Malchiodi, Cutcher, & Belkofer, 2018). Another thing that therapists need to be aware of when conducting virtual sessions is the fact that telehealth can cause a client to exhibit a “disinhibition effect” (Suler, 2004, as cited in Malchiodi, Cutcher, & Belkofer, 2018) that can cause them to share deeply before they are ready, and the client may end therapy prematurely.

With the changing ways in which we communicate with the rise of digital communication via email and text messaging, therapists have met these changes by incorporating these methods in their communication with clients (Tyler & Guth, 2004, as cited in Orr, 2006). Using these communication methods have changed the typical office hours of communication by extending the times in which a client can send a message to their therapist. With client’s being able to contact their face-to-face or virtual therapist by text and/or email it can create a situation where the therapist is responding in real time, and after normal business hours (Malchiodi,

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Cutcher, & Belkofer, 2018). This all-hour access can cause a therapist to not take ample time away from their clinical work, and not have the time to reflect and recharge post sessions.

Boundaries become a concern in areas of social media as well. This is of particular concern in the prospect of “friending” clients on social media platforms, such as Facebook, which would confuse the boundaries of the therapist-client relationship (Malchiodi, Cutcher, & Belkofer, 2018). Another issue in friending clients is that it gives clients access to the therapist’s social circles of friends and family, which can have unforeseen consequences for both the client and therapist. A therapist should be aware of what they post online on social media and on other internet sites, as clients can gain access to these posts via Google and other internet searches. On social media, like Facebook, things can be set to private or viewable by only certain people, but sites such as Facebook remind us that “no security measures are perfect or impenetrable and that they cannot control the actions of other users who gain access to your information” (Malchiodi, Cutcher, & Belkofer, 2018, p. 55). A social media policy is crucial when working with clients and is required by the American Counseling Association, if one is a licensed mental health counselor in the U.S. with an online presence of any kind (ACA, 2014, as cited in Malchiodi, Cutcher, & Belkofer, 2018). This policy should be given to new clients so that they have a clear understanding of the guidelines concerning interactions on the internet.

Discussion

The statistics of digital media and technology ownership and use are astronomical. The number of Americans that own and use digital technology has grown exponentially in the past ten years, and the trend continues to grow (Pew Research Center, 2019). Almost all young adults own a smartphone and given the usage statistics for children and teens this number stands to increase as well. Digital technology, computers, video games, smartphones, and applications are

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completely embedded in our everyday lives; we communicate with each other on them, we play games, we learn about interests, ourselves, and our passions, and we create with them (Choi & Behm-Morawitz, 2018; Orr, 2012). We utilize these things to make sense of our world and even to make sense of ourselves.

There are applications of all kinds to help us do just about anything you can think of, and it is not surprising that people are turning to their devices for assistance with mental health, physical health, and wellness for so many reasons (Orr, 2010; Wasil et al., 2020). The sheer convenience of having these tools at our fingertips and readily available at any time is a big motivator. It enables people to monitor their symptoms, use coping strategies in real world situations, and use interventions such as behavior modification, cognitive behavioral therapy, and meditation without having to wait to be in the therapy office (Proudfoot, 2013, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019; Wasil et al., 2020). People can connect with their therapist outside of the office for assistance, and for actual sessions as well, which can help in people having access to services they might normally not be able to for many reasons, including financial, availability, accessibility, and lack of transportation (Gonzalez et al., 2010, as cited in Stiles-Shields, Montague, Kwasny, & Mohr, 2019).

Concerns about these types of applications include the fact that there are so many available it can be difficult to narrow down the search results to find an application that meets the user's unique needs including the available features and cost, whether the app has a free trial to test it out, and if the rationale or interventions used by the app are based on empirical evidence and theory or not (Demo, 2017). Evidence shows that when applications are based on empirically supported theory and interventions, user count is not as high or maintained and the question remains of why this is (Wasil et al., 2020). There is not a lot of data on this question and future

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research into this area would prove beneficial, such as exploring what types of things are needed to make a mental health application desirable to try and what would keep users engaged. With data such as this mental health applications could be developed that would be engaging, empirically driven, and more effective for use for people with mental health concerns.

Applications are being used effectively with people with autism, people with down syndrome, and clients with dementia. Applications like these can be developed with the specific populations needs in mind to tailor the experiences for users to work on specific areas where they would like to see growth, such as social skills, or attention focus, or to get better acclimated to experiences to limit distress in those situations in real life (Demo, 2017). Concerns in this area include research regarding applications with vulnerable populations, and motivations behind the development of applications. Apps have the potential to make their creators large monetary sums and there are some concerns over the varied motivations and collaborative interests (commercial, clinical, advocacy, etc.) factoring into the development of application for populations such as people with ASD (Demo, 2017). Applications like Samsung's Look at Me are at the forefront of this conversation given their initial deficit-based approach to people with ASD. Samsung has altered some of their advertisements to use more neurodiverse and strength-based perspectives, but as of 2017, they have made no meaningful changes to the apps design since 2016 (Demo, 2017). Regarding conducted research with vulnerable populations, Santi (2015) says "it is about looking for a balance between respect and the protection of these people and groups, and the commitment and need to perform research to know more about them and to collaborate in their empowerment." (Santi, 2015, p.71, as cited in Martín-Sabarís, & Brossy-Scaringi, 2017).

Another demographic that has seen positive interactions with digital media and technology is that of children and adolescents. Given that younger generations have started to

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use these technologies from a young age this is not surprising (Ofcom 2012; McPake et al. 2013, as cited in Sakr, Connelly, & Wild, 2018; Sakr, Connelly, & Wild, 2018). Many adolescents and children are very skilled and comfortable in the use of digital media and technology and use them at least daily in some capacity. Given that these platforms are so ubiquitous to this age group not incorporating them into the therapeutic setting effectively ignores a large part of these client's lives (Austin, 2009). Further, it is a missed opportunity to form a stronger therapeutic relationship, as well as help to break down barriers or resistances that children and teens have to traditional talk therapy. Looking at the statistics of use it is not just younger generations using digital technology, all ages are engaging in digital culture (Carlton, 2014). In an effort to meet the client where they are, a clinician should have at the very least a basic knowledge and understanding of something that holds such a large part of their client's lives, as well as an understanding of digital culture and how it impacts clients on a multitude of levels, including identity formation, socialization, and possible issues that could arise from its use (Orr, 2010).

Therapists are beginning to incorporate digital media and technology into their sessions at larger rates, but many still hold onto resistances to its use, including the debate over whether digital art is actually art, and how therapeutic it is versus traditional art making (Asawa, 2009; Gerity, 2001; Kapitan, 2007; Malchiodi, 2000; Orr, 2006b; Potash, 2009, as cited in Carlton, 2014). While it is true that not all digital creating gives the same tactile sensations as traditional methods, creating digitally can give the same therapeutic effects and benefits as traditional forms (Austin, 2009). With the understanding of body mapping and how tools become an extension of oneself, a digital drawing stylus is as much a part of the creator's arm map as an analog pencil would be, giving the brain and body the same sensations, just with different tools (Blakeslee and Blakeslee, 2007, as cited in Austin, 2009). Clients can express themselves in new and different

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ways, with greater variety and precision in some cases than they could achieve with traditional methods, which can allow for deeper insight and self-awareness through the creative process (Austin, 2009).

Another major area of resistance in therapists using digital technology is a lack of knowledge, little to no training, and low feeling of competence in its use in general and with clients. It is surprising that with such widespread use among the population, as well as the increased use of technology in therapy and in creative therapies, there are not many colleges or universities incorporating digital technology and applications into their educational programs for counselors in training. Expressive Arts Therapists use a multimodal approach with clients, and they use tools from many modalities in the therapeutic process with clients (Rogers, 2000). Digital technology can be another tool that can be used alone, or in conjunction with traditional modalities to achieve therapeutic insight and growth with many different clients. Having multiple tools to use with clients also helps to reinforce client's interest in creativity, so that creative work is not limited to one particular medium (McNiff, 2009, as cited in Evans, 2012). It would be beneficial for therapists in training to learn the basics of digital technology and media, how digital media and technology affects the culture of clients they may be working with, what is available for use therapeutically with clients, and how to effectively use these things in the therapeutic session. As evidenced by the phototherapy courses Wolf (2007) offers, it would be beneficial for therapists in training to participate in these interventions personally as well, to experience what the client would and to be able to empathize and understand the client on a deeper level.

Another area of note with this topic is the ethical concerns that go along with the use of digital media and technology. The maintaining of protections over client's privacy and

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confidentiality is paramount, and clinicians using digital technology need to gain an understanding of the ethical implications of its use (Malchiodi, Cutcher, & Belkofer, 2018). They further need to understand best practices of how to use these tools effectively and ethically with a wide variety of clients. This can be difficult given that there is not a standard of ethics that has been developed for clinicians to govern the use of technology in the therapeutic setting. There is a variety of approaches to ethical standards/codes set by organizations such as the International Expressive Arts Therapy Association (IEATA), and the American Art Therapy Association (AATA). IEATA (2017) does not have any specifically listed ethical code regarding the use of digital media and technology, simply stating that “when innovative techniques are used for which there are no established standards, Expressive Arts Therapists must take whatever precautions necessary to protect the welfare of their clients” while AATA (2013) has a section on the use of digital media and technology, as well as a section on conducting art therapy electronically. These sections outline important guidelines including the importance of informed consent when using digital tools with clients, implications of creations being published online, adhering to applicable laws, and therapist’s personal social media use (AATA, 2013). Ultimately therapists are responsible for seeking out this knowledge and ensuring the well-being of the client when using digital media.

While cellphone and digital media use has skyrocketed to a magnitude that people cannot imagine life without it, the psychology world has been slower in its embracing of these tools for a variety of reasons (Perrin, & Kumar, 2019; Choi, & Behm-Morawitz, 2018). By giving into our resistances, we risk alienating and marginalizing a dominant culture and a large part of our client’s identities. When it is a clinician’s job to help clients understand and navigate their world and the pieces in it, how can we effectively do this while ignoring such an integral portion of it?

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Instead of focusing on the perceived negatives, or possible pitfalls, we should be examining this media in its entirety, being aware of both the possibilities and the caveats to its use. This way we can find ways to effectively harness these tools for positive therapeutic growth both personally and professionally, both for the aid of ourselves and our clients, while also gaining knowledge into the limitations and concerns of its use in this capacity. In embracing of technology, we can actively participate in and contribute to the technological innovation of the field of psychology and expand the possibilities and efficacy of creative counseling, rather than settling for the status quo of current traditional methods.

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THESIS APPROVAL FORM

**Lesley University
Graduate School of Arts & Social Sciences
Expressive Therapies Division
Master of Arts in Clinical Mental Health Counseling: Expressive Arts Therapy, MA**

Student's Name: Katherine McAdams

Type of Project: Thesis

Title: The Use of Digital Mediums in Expressive Arts Therapy

Date of Graduation: September 15, 2021

In the judgment of the following signatory this thesis meets the academic standards that have been established for the above degree.

Thesis Advisor: Sarah Hamil, Ph.D., LCSW, RPT-S, ATR-BC _____